

REMARKS

By this Amendment, claims 16 and 21-22 are amended. Claim 23 remains in the application. Thus, claims 16 and 21-23 are active in the application. Reexamination and reconsideration of the application are respectfully requested.

In item 3 on page 2 of the Office Action, claims 16 and 21-23 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of Shino et al. (U.S. 6,320,326) in view of Kanazawa et al. (U.S. 6,288,692) and further in view of Yamada (U.S. 6,275,203). Further, in item 4 on page 5 of the Office Action, claims 16 and 21-23 were rejected as being unpatentable under 35 U.S.C. § 103(a) as being unpatentable over Kanazawa et al. in view of Shino et al. and further in view of Yamada.

Without intending to acquiesce to the Examiner's rejection, claim 16 was amended in order to more clearly illustrate the marked differences between the present invention and the applied references. Accordingly, the Applicants respectfully submit that claims 16 and 21-23 are clearly patentable over claims 1-8 of Shino et al., Shino et al., Kanazawa et al. and Yamada for the following reasons.

The present invention, as recited in claim 16, provides an alternating current (AC) plasma display panel having a first substrate and a second substrate that are disposed facing each other to form a discharge space therebetween. At least one of the first substrate and the second substrate is transparent. First and second display electrodes are disposed over the first substrate and are arranged in rows adjacent to each other. Each of the first and second display electrodes comprises a scan electrode and a sustain electrode. One or more conductors are disposed over the first substrate, and each of the conductors is adjacent to a respective one of the first and second display electrodes. Further, each of the conductors are spaced away from the scan electrode and the sustain electrode of a respective one of the first and second display electrodes, and one of the conductors is electrically connected to the sustain electrode of the first display electrode. The AC plasma display panel of claim 16 also comprises a plurality of data electrodes which are disposed over the second substrate, where the plurality of data electrodes are disposed perpendicular to the first and second display electrodes, and discharge cells are provided at intersections of the data electrodes and the first and second display electrodes.

As described in paragraph [0024] on page 7 of the substitute specification, “the panel performs a sustaining discharge between each pair of scan electrode 10 and sustain electrode 11. A distance between conductor 12 and scan electrode 10 in its adjoining row is provided to be long enough in order to prevent a false discharge between conductor 12 in any row and scan electrode 10 in its adjoining row.”

Accordingly, the present invention provides that a distance between a scan electrode 10 and a sustain electrode 11 is short so as to generate a discharge therebetween. Further, a distance between a conductor 12 which is electrically connected to the scan electrode 10 and the sustain electrode 11 of a display electrode that is adjacent to another display electrode including the sustain electrode is long enough so as to not generate a discharge therebetween.

This advantageous feature of the present invention has been added to claim 16. Accordingly, claim 16 has been amended to recite that in order to prevent a discharge between the one of the conductors, which is defined as being electrically connected to the sustain electrode of the first display electrode, and the scan electrode of the second display electrode, a distance between the one of the conductors and the scan electrode of the second display electrode is longer than a distance between the scan electrode of the first display electrode and the sustain electrode of the first display electrode.

In item 3 on page 3 of the Office Action, the Examiner asserted that the limitations of two pairs of scan (SCN) and sustain (SUS) electrodes recited in claims 1-8 of Shino et al. correspond to the display electrodes and conductors as recited in claim 16. That is, the Examiner has interpreted that one pair of scan and sustain electrodes corresponds to the display electrodes of claim 16 and that another pair of scan and sustain electrodes corresponds to the conductors of claim 16.

However, as described above, claim 16 recites that the one or more conductors are adjacent to a respective one of the first and second display electrodes, which are recited as each comprising both a scan electrode and a sustain electrode. Claim 16 also recites that one of the conductors is electrically connected to the sustain electrode of the first display electrode.

Shino et al., in claims 1 and 5, recites “means for applying a certain current to said scan and sustain electrode,” while claim 8 of Shino et al. recites “means for applying

a certain current to each of said paired scan and sustain electrodes.” In accordance with the disclosure of Shino et al., the means for applying a current to the scan and sustain electrodes is described as each scan or sustain electrode being electrically connected to a respective driving circuit. In particular, the odd scan electrodes of Shino et al. are electrically connected with a scan electrode driving circuit 2a, the odd sustain electrodes are electrically with a sustain electrode driving circuit 3a, the even scan electrodes are electrically connected with a scan electrode driving circuit 2b, and the even sustain electrodes are electrically connected with a sustain electrode driving circuit 3b (see Column 8, lines 28-41 and Figure 1). Accordingly, for the Examiner to interpret that claims 1-8 of Shino et al. or the specification of Shino et al. discloses that a “conductor” of Shino et al. (i.e., a pair of scan and sustain electrodes) is adjacent to a respective one of the display electrodes, Shino et al. must be interpreted as disclosing either that an odd “conductor” is adjacent to an even display electrode including even scan and sustain electrodes, or that an even “conductor” is adjacent to an odd display electrode including an odd display electrode including odd scan and sustain electrodes.

However, as described above, the odd scan electrodes and the odd sustain electrodes are electrically connected to the scan electrode driving circuit 2a and the sustain electrode driving circuit 3a, respectively. The even scan electrodes and the even sustain electrodes are electrically connected to the scan electrode driving circuit 2b and the sustain electrode driving circuit 3b.

Therefore, despite the Examiner’s assertion to the contrary, one of the “conductors” of claims 1-8 of Shino et al. or the specification of Shino et al. (i.e., one pair of scan and sustain electrodes), is not electrically connected to the sustain electrode of a first display electrode (i.e., another pair of scan and sustain electrodes). That is, a “conductor” of Shino et al., as interpreted by the Examiner, which is adjacent to a respective one of the first and second display electrodes is not electrically connected to the sustain electrode of the display electrode to which the conductor is adjacent.

Accordingly, neither claims 1-8 of Shino et al. nor the specification of Shino et al. disclose or suggest that one of the conductors is electrically connected to the sustain electrode of the first display electrode, as recited in claim 16.

Furthermore, neither claims 1-8 of Shino et al. nor the specification of Shino et al. disclose or suggest that in order to prevent a discharge between the one of the conductors, which is defined as being electrically connected to the sustain electrode of the first display electrode, and the scan electrode of the second display electrode, a distance between the one of the conductors and the scan electrode of the second display electrode is longer than a distance between the scan electrode of the first display electrode and the sustain electrode of the first display electrode, as recited in claim 16.

Instead, Shino et al. merely discloses that each of the sustain electrodes is parallel to each of the scan electrodes. However, Shino et al. clearly does not disclose or suggest the dimensional relationship between one pair of scan and sustain electrodes (the “conductors”) and another pair of scan and sustain electrodes as recited in claim 16.

Similarly, Kanazawa et al. also does not disclose or suggest that one of the conductors is electrically connected to the sustain electrode of the first display electrode. Instead, in accordance with the Examiner’s previous labeling of the elements, and in view of Column 10, lines 15-39 and Figures 13 and 14, Kanazawa et al. discloses that “scan electrodes” (Y electrodes) 51 are connected to a scan driver 62, “sustain electrodes” (Xo electrodes) 52o are connected to an odd X sustaining circuit 61o, and “conductors” (Xe electrodes) 52e are connected to an even X sustaining circuit 61e. In other words, “sustain electrode 52o” is electrically connected to X sustaining circuit 61o completely independent of “conductor 52e”, “scan electrode 51” is electrically connected to scan driver 62 completely independent of “conductor 52e”, and “conductor 52e” is electrically connected to X sustaining circuit 61e completely independent of “sustain electrode 52o” or “scan electrode 51”.

Accordingly, similar to claims 1-8 of Shino et al. and the specification of Shino et al., Kanazawa et al. also does not disclose or suggest that one of the conductors is electrically connected to the sustain electrode of the first display electrode, as recited in claim 16.

Furthermore, Kanazawa et al. also clearly does not disclose or suggest that in order to prevent a discharge between the one of the conductors, which is defined as being electrically connected to the sustain electrode of the first display electrode, and the scan electrode of the second display electrode, a distance between the one of the conductors

and the scan electrode of the second display electrode is longer than a distance between the scan electrode of the first display electrode and the sustain electrode of the first display electrode, as recited in claim 16.

Yamada discloses that scanning electrodes 34 are connected to scanning drivers 42 and that sustain electrodes 35 are connected to sustain drivers 44 (see Column 10, lines 21-29 and Figure 8). Accordingly, Yamada also does not disclose or suggest that one of the conductors is electrically connected to the sustain electrode of the first display electrode, as recited in claim 16.

Furthermore, Yamada also does not disclose or suggest that in order to prevent a discharge between the one of the conductors, which is defined as being electrically connected to the sustain electrode of the first display electrode, and the scan electrode of the second display electrode, a distance between the one of the conductors and the scan electrode of the second display electrode is longer than a distance between the scan electrode of the first display electrode and the sustain electrode of the first display electrode, as recited in claim 16.

Accordingly, claims 1-8 of Shino et al., the specification of Shino et al., Kanazawa et al. and Yamada do not disclose or suggest, either individually or in combination, each and every limitation of claim 16.

Therefore, no obvious combination of claims 1-8 of Shino et al., the specification of Shino et al., Kanazawa et al. and Yamada would result in the invention of claim 16 since claims 1-8 of Shino et al., the specification of Shino et al., Kanazawa et al. and Yamada fail to disclose or suggest, either individually or in combination, each and every limitation of claim 16.

Accordingly, claim 16 is clearly patentable over claims 1-8 of Shino et al., the specification of Shino et al., Kanazawa et al. and Yamada.

Furthermore, the Applicants respectfully submit that the clear distinctions discussed above are such that a person having ordinary skill in the art at the time the invention was made would not have been motivated to modify claims 1-8 of Shino et al., Shino et al., Kanazawa et al. and Yamada in such a manner as to result in, or otherwise render obvious, the present invention as recited in claim 16. Therefore, it is submitted

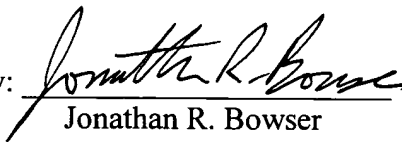
that the claim 16, as well as claims 21-23 which depend therefrom, are clearly allowable over the prior art as applied by the Examiner.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is respectfully solicited.

If, after reviewing this Amendment, the Examiner feels there are any issues remaining which must be resolved before the application can be passed to issue, the Examiner is respectfully requested to contact the undersigned by telephone in order to resolve such issues.

Respectfully submitted,

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